

Application No. 09/848,600
Supplemental Reply to Office Action of June 30, 2003

Amendments to and Listing of the Claims:

1. to 19. (Canceled)

20. (Previously presented) A drug delivery composition for the treatment of a viral infection affecting the nasal cavity comprising a chitosan solution and Intercellular Adhesion Molecule-1 (ICAM-1), wherein the ICAM-1 is present in the composition in a concentration of 0.01% to 20% by weight per volume and the composition is adapted to adhere to the epithelia and/or mucosal surface of the nasal cavity upon administration.

21. (Previously presented) The drug delivery composition of claim 20, wherein the chitosan solution contains chitosan in a concentration of 0.2% to 5% weight per volume.

22. (Previously presented) A drug delivery composition for nasal administration comprising a plurality of microspheres and Intercellular Adhesion Molecule-1 (ICAM-1), wherein the microspheres comprise a material selected from starch chitosan, gellan, gelatin, hyaluronic acid, alginate, and gellan; the ICAM-1 is present in the composition in a concentration of about 0.1% to 50% by weight per volume; and the composition is adapted to adhere to the epithelia and/or mucosal surface of the nasal cavity.

23. (Previously presented) The drug delivery composition of claim 22, wherein the ICAM is present in an amount of 1 to 20% by weight of the microspheres.

24. (Previously presented) The drug delivery composition of claim 22, wherein each of the microspheres has a diameter of 1 to 200 microns.

25. (Previously presented) The drug delivery composition of claim 22, wherein each of the microspheres has a diameter of 40 to 60 microns.

26. (Previously presented) A method of intranasally administering Intercellular Adhesion Molecule-1 (ICAM-1) for treatment of a viral infection affecting the nasal cavity to a patient comprising adhering an antivirally effective amount of a composition to the epithelia and/or mucosal surfaces of the nasal cavity of the patient, wherein the composition comprises ICAM-1 and a bioadhesive material selected from:

(a) a chitosan solution, and

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(b) a plurality of microspheres, the microspheres comprising a material selected from the group consisting of starch, chitosan, gelatin, gellan, hyaluronic acid, and alginate.

27. (Previously presented) The method of claim 26, wherein the composition is adhered by a chemical or physical bond selected from Van der Waals interaction, ionic interaction, hydrogen bonding, and polymer chain entanglement.

28. (Previously presented) The method of claim 26, wherein the bioadhesive material is a chitosan solution and the chitosan is present in the solution in an amount of 0.2% to 5% weight per volume.

29. (Previously presented) The method of claim 26, wherein the bioadhesive material is the plurality of microspheres and the ICAM-1 is present in the composition in an amount of about 0.1 and 50% by weight of the microspheres

30. (Previously presented) The method of claim 29, wherein the ICAM-1 is present in an amount of 1 to 20% by weight of the microspheres.

31. (Previously presented) The method of claim 26, wherein the bioadhesive material is a plurality of microspheres each having a diameter of 1 to 200 microns.

32. (Previously presented) The method of claim 26, wherein the bioadhesive material is a plurality of microspheres each having a diameter of 40 to 60 μm .

33. (Previously presented) A method of treatment of a viral infection affecting the nasal cavity comprising administering to the nasal cavity an antivirally effective amount of a composition comprising ICAM-1 and a bioadhesive material selected from:

(a) a chitosan solution, and

(b) a plurality of microspheres, the microspheres comprising a material selected from the group consisting of starch, chitosan, gelatin, gellan, hyaluronic acid, and alginate,

which composition adheres to the epithelia and/or mucosal surface of the nasal cavity upon administration.

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34. (Previously presented) A method of improving retention of an ICAM-1 composition in the nasal cavity for treatment of a viral infection affecting the nasal cavity, the method comprising administering to the nasal cavity an antivirally effective amount of a composition comprising ICAM-1 and a bioadhesive material selected from:

- (a) a chitosan solution, and
- (b) a plurality of microspheres, the microspheres comprising a material selected from the group consisting of starch, chitosan, gelatin, gellan, hyaluronic acid, and alginate,

which composition is adapted to adhere to the epithelia and/or mucosal surface of the nasal cavity, thereby increasing the retention of the composition in the nasal cavity.

35. (Previously presented) The method of claim 34, wherein the composition is adhered by a chemical or physical bond selected from Van de Waals interaction, ionic interaction, hydrogen bonding, and polymer chain entanglement.

36. (New) The method of claim 26, wherein the bioadhesive material is a chitosan solution and the ICAM-1 is present in the solution in an amount of 0.01 to 20% by weight per volume.